Name:

p1105: Factoring when $a = 1$ (v15)

Example: Factor $x^2 + 5x - 24$

Find two numbers whose product is -24 and whose sum is 5. Focus on finding factor pairs of -24. Eventually you consider 8 and -3 because $(8)(-3) = -24$. You verify this pair is correct because $(8) + (-3) = 5$. Thus, your answer:

$$(x + 8)(x - 3)$$

1. Factor $x^2 - 8x + 12$

2. Factor $x^2 - 11x + 30$

3. Factor $x^2 + 3x - 10$

4. Factor $x^2 - 3x - 40$

5. Factor $x^2 - 10x + 9$

6. Factor $x^2 + x - 6$

7. Factor $x^2 - 12x + 32$

8. Factor $x^2 - 81$

9. Factor $x^2 - x - 72$

10. Factor $x^2 - 10x + 16$

11. Factor $x^2 - 4x - 45$

12. Factor $x^2 + 5x - 14$

13. Factor $x^2 - 10x + 25$

14. Factor $x^2 - 16$

15. Factor $x^2 - 3x + 2$